

NASA TECH BRIEF



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Special Tool Kit Aids Heavily Garmented Workers

The problem:

Heavily garmented workers, especially those wearing heavy gloves to protect against hostile environments, experience considerable difficulty involving mobility, visibility, and dexterity in using common hand tools. Tools clamped to boards or metal sheeting or otherwise restrained in boxes, cabinets, or lockers have proven unsuited for the worker encumbered by heavy gloves.

The solution:

A triangular tool kit filled with polyurethane that is machined to receive the various tools and hold them in a snug but quick-release fit.

How it's done:

The tool kit shell is made in two triangular-shaped drawn aluminum sections that are fitted with a nylon web carrying strap for the worker. Two adhesive restraint buttons, attached to spring loaded retracting cables are mounted on one side of the case to permit mounting on a bulkhead, cabinet, machine frame, or the like so the worker can readily extract and replace the various tools.

After shell construction, each section is foamed with a room-temperature curing polyurethane. When the foam is cured, compartments for the various tool

components are milled out and the two mating foam surfaces are leveled to permit closing of the kit. After final fitting of parts, the parts are removed and all the polyurethane surfaces are given a thin coating of epoxy to provide a tough, durable surface.

Notes:

1. This design allows placement of the kit within easy reach of the worker and provides excellent protection for the tools during storage or shipment.
2. Inquiries concerning this invention may be directed to:

Technology Utilization Officer
Manned Spacecraft Center
Houston, Texas 77058
Reference: B66-10403

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

Source: Allen E. Holmes
of Martin-Marietta Corporation
under contract to
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Category 05